A NEW GENUS OF FLACOURTIACEAE (PANGIEAE—HYDNOCARPINAE) FROM TROPICAL QUEENSLAND

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With one plate

Baileyoxylon gen. nov. Flores dioici. Calyx 5-lobatus. Petala 5 valde imbricata, squamis hirsutis magnis totidem oppositis. Flores masculi: Stamina 5, petalis alterna, antherae magnae, loculis rima laterali dehiscentibus, filamentis brevis applanatis in connectivo lato gradatim productis. Flores foemini ignoti. Fructus ignotus. Arbor. Folia penninervia. Paniculae axillares et laterales, thyrsoideae.

Species 1 in Australia boreali crescens.

The genus is dedicated to Dr. Irving W. Bailey.

Baileyoxylon lanceolatum sp. unica.

Arbor ad 25 m. alta, cortice griseo (Kajewski), ramulis robustis lenticellatis, novellis ferrugineo-pubescentibus mox glabris. Folia petiolata, lanceolata, apice acuminata, basi cuneata; nervi et venuli supra indistincti, subtus leviter elevati; nervi praecipui ca. 10 in utroque latere, in venam intramarginalem irregularem 5–6 mm. remotam conjuncti; petiolus subrobustus, 1–1.5 cm. longus; lamina 10–16 cm. longa, 4–5 cm. lata. Paniculae thyrsoideae multiflorae axillares et laterales, 4–10 cm. longae, ramulis ultimis dense ferrugineo-pubescentibus basim versus gradatim glabrescentibus. Pedicelli robusti 1–2 mm. longi. Calyx extus ferrugineis pilis sparsis vestitus, 2.5 mm. diam., 5-lobatus, lobis rotundis. Flos masc.: Petala 5, imbricata, ovata, 3 mm. longa, cremeo-viridia (Kajewski) intus squama (aurantica—Kajewski), hirsuta petalum fere aequantia aucta. Stamina 5, cum petala alternantia, filamentis perbrevibus in connectivum latum gradatim attenuatis, antheris 2 mm. longis. Flores foem. et fructus ignoti.

Ghurka Pocket (Atherton Tableland), alt. 700 m. (common in rain forest), *S. F. Kajewski 1230* (male flowers in advanced bud), Sept. 24, 1929 (small tree, up to 15 m. high, leaves dark green); Boonjie (Atherton Tableland), alt. 700 m. (common in rain forest), *S. F. Kajewski 1263* (TYPE: flowering specimens), Oct. 3, 1929, (medium sized tree, up to 25 m. high, bark medium grey, light yellow when cut, wood light yellow, petals cream-green, each petal having inside it a smaller orange "petal").

As there was some difficulty in satisfactorily placing Kajewski's plant, specimens were handed over to Dr. I. W. Bailey for help in elucidating its botanical affinities by anatomical means. Dr. Bailey kindly undertook to do this, and reported: "The general anatomical structure of the stem (including the node) is typically flacourtiaceous. Furthermore, it is of the more primitive structural type such as occurs in the Oncobeae and Pangieae. The combined structural and floral evidence suggests that the tree probably belongs in or near the Hydnocarpeae. The plant differs from such genera as *Hydnocarpus, Taraktogenos,* and *Trichadenia,* yet exhibits a combination of structures that occur in these genera. For example, the form of the stamens and the structure of the pollen are similar to certain species of *Hydnocarpus* and *Taraktogenos,* but unlike those of *Ryparosa.* Unfortunately, I have not been able to obtain pollen of the genus *Trichadenia.* Analysis of the leaf reveals no evidence which would exclude the plant from the Hydnocarpeae. On the contrary, certain structures of the leaf are suggestive of relationship with this group. In other words, I suspect that the plant is a new genus related to the Hydnocarpeae."

Later, flowers of *Trichadenia* were obtained from the U. S. National Herbarium, and the pollen examined by Dr. Bailey, who reported: "I have received some flowers of *Trichadenia.* The pollen of *Hydnocarpus, Taraktogenos, Trichadenia,* and the Queensland tree belong to the same general structural type which differs markedly from that of *Ryparosa.* The pollen of *Trichadenia* and of the Queensland plant both have a coating of oil or fat which brings them into closer relationship. The evidence from pollen, from leaves, nodes and stems, plus that from flowers, now indicates without doubt that the Queensland plant belongs in the *Hydnocarpeae,* and is a new genus related to *Trichadenia.* Dr. Dahl has checked my conclusions regarding the pollen evidence."

Dr. Bailey's findings are borne out by the floral structure. The new genus seems very close to *Trichadenia,* which differs in having a calyptrate calyx and stamens with an elongated filament.

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